

CLAIMS

what is claimed is:

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1. (currently amended) A method of loading content to a server in anticipation of a need for the content by network clients, the method comprising:
 - (a) determining the location of a client or group of clients that are likely to access the content;
 - (b) determining a first proximity between the client or group of clients and a first server capable of storing and serving the content;
 - (c) determining a second proximity between the client or group of clients and a second server capable of storing and serving the content; and
 - (d) determining a first loading proximity between a source of the content and the first server;
 - (e) determining a second loading proximity between a source of the content and the second server; and
 - (d) ~~using the first and second loading proximities together with the first and second proximities to determine which of the first and second servers should receive the content.~~
 - (d f) based upon the relative values of the first and second proximities and the values of the first and second loading proximities, loading the content into one of the first and second servers.
 2. (original) The method of claim 1, wherein loading the content to the second server is performed automatically by a content control system on the network.
 3. (currently amended) The method of claim 2, wherein performing (b), (c), ~~and~~ (d) and (e) is accomplished by the content control system.
 4. (original) The method of claim 1, wherein the first and second proximities are determined dynamically by a content control system.
 5. (original) The method of claim 1, wherein the content is loaded to the server that is most proximate the client or group of clients.
 6. (original) The method of claim 1, wherein the content is multimedia content.
 7. (original) The method of claim 6, wherein the multimedia content is transmitted over the network in a compressed format.
 8. (original) The method of claim 1, wherein the content is video content.
 9. (original) The method of claim 1, wherein at least one of the first and second proximities is determined by a combination of the following factors: bandwidth, number of hops, congestion, noise and loss on a network segment, and charges incurred to send.
 10. (original) The method of claim 1, wherein at least one of the first and second proximities is determined by a considering whether the server and the client or group of clients are on the same sub-network.
 11. (original) The method of claim 10, wherein content is loaded to the second server when the second server and the client or clients are on the same sub-network and the first server and the client or clients are not on the same sub-network.

12. (currently amended) The method of claim 9, wherein at least one of the first and second proximities is determined by summing the contributions of the factors. ~~further comprising:~~
~~determining a first loading proximity between a source of the content and the first server;~~
~~determining a second loading proximity between a source of the content and the second server; and~~
~~using the first and second loading proximities together with the first and second proximities to determine which of the first and second servers should receive the content.~~

13. (currently amended) A method of loading content to a server in anticipation of a need for the content by network clients, the method comprising:
(a) ~~predicting~~ determining the location of at least one a client or group of clients not currently requesting the content but that are is likely to access the content;
(b) ~~determining a first proximity between the at least one client and the relative proximities of (i) the client or group of clients to a first server not currently storing but capable of storing and serving the content, and (ii) the client or group of clients and a second server capable of storing and serving the content~~
determining a second proximity between the at least one client and a second server not currently storing but capable of storing and serving the content; and
(e) ~~based upon the relative proximity values of the first and second proximities,~~ loading the content into one of the first server and the second server.

14. (currently amended) A method of loading content to a server in anticipation of need by network clients, the method comprising:
(a) determining the location of a client or group of clients that require access to the content;
(b) identifying a first server currently storing the content and serving the client's requirements for access to the content;
(c) identifying a second server that does not currently store said content but that has the capability of storing and serving the content;
(d) determining a first proximity between the first server and the client or group of clients;
(e) determining a second proximity between the second server and the client or group of clients, wherein at least one of the first and second proximities is determined by at least one of the following factors, the factors weighted based on the type of content to be loaded: congestion, noise and loss on a network segment, and charges incurred to send ; and
(f) if the relative values of the first and second proximities meet a defined constraint, loading the content to the second server.

15. (original) The method of claim 14, wherein (d) includes determining whether the server and the client or group of clients are on the same sub-network.

16-22 (cancelled)

23. (currently amended) A method of releasing stored content items from a server to make room for new content items, the method comprising:

(a) identifying, on the server, a first stored content item and a second stored content item;

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- (b) determining a first proximity between the server and a source of the first stored content item;
 - (c) determining a second proximity between the server and a source of the second stored content item; and
 - (d) releasing one of the first and second stored content items based upon the relative values of the first and second proximities, wherein at least one of the first and second proximities is determined by at least one of the following factors: ~~bandwidth~~, number of hops, congestion, noise and loss on a network segment, and charges incurred to send .

24. (original) The method of claim 23, wherein at least one of the sources of the first and second stored content items is a content library.

25. (original) The method of claim 23, wherein the stored content items are video content items.

26. (original) The method of claim 23, wherein the first and second stored content items are identified based upon a cache release protocol.

27. (original) The method of claim 26, wherein the cache release protocol is a Least Recently Used algorithm.

28. (original) The method of claim 23, wherein at least one of the first and second proximities is determined by a combination of the following factors: bandwidth, number of hops, congestion, noise and loss on a network segment, and charges incurred to send.

29. (currently amended) A content control system for propagating content on a network, the content control system comprising:

an interface to the network; and

a processor and a memory coupled to said processor, the processor and memory configured or designed to determine proximities of network nodes to one another and to propagate content to one of said nodes based upon a proximity determination, wherein ~~at least one of the proximities is~~ are determined by at least one of the following factors: bandwidth, number of hops, congestion, noise and loss on a network segment, and charges incurred to send and wherein the factors are weighted based upon the type of content propagated.

30. (original) The content control system of claim 29, wherein the interface, processor, and memory are provided on a router.

31. (original) The content control system of claim 29, wherein the interface, processor, and memory are provided on a PC or workstation.

32. (original) The content control system of claim 29, further comprising an operating system.

33. (original) The content control system of claim 29, further comprising a video server running on the operating system.

34. (original) The content control system of claim 29, further comprising a mass storage device capable of storing content and a mass storage controller capable of controlling access to content stored in the mass storage device.

35. (original) The content control system of claim 29, further comprising one or more proximity determining tools.

36. (new) A method of loading content to a server in anticipation of a need for the content by network clients, the method comprising:

- (a) determining the location of a client or group of clients that are likely to access the content;
- (b) determining the relative proximities of (i) the client or group of clients to a first server not currently storing but capable of storing and serving the content and (ii) the client or group of clients and a second server not currently storing but capable of storing and serving the content; and
- (c) based upon the relative proximities, loading the content into one of the first server and the second server.

37. (new) The method of claim 36, wherein the first and second proximities are determined dynamically by a content control system.

38. (new) The method of claim 13, wherein the first and second proximities are determined dynamically by a content control system.